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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,949	10/28/2003	William S. Scott	1208-54	3748

23117 7590 05/23/2005

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EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT PAPER NUMBER

3726

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/693,949	SCOTT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Marc Jimenez	3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 15-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/723,275.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10282003</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 15-24** are rejected under 35 U.S.C. 102(b) as being anticipated by Speller et al. (US 5,220,718).

Speller et al. teach an aircraft assembly process for assembling at least one aircraft component (col. 1, lines 18-20) comprising the steps of: calculating a plurality of predetermined positions and corresponding orientations in space at which at least one aircraft component is to be supported (col. 1, lines 29-30, the programmable holding fixture is considered to "calculate"), designing a fixture frame **60** configured to provide support for the at least one aircraft component **92,94,96** at predetermined locations of the frame **60** associated with the predetermined positions, constructing the fixture frame **60** by selecting elongate members **270,266** having predetermined lengths and connecting the elongate members **270,266** together by releasable fastening means **268**, securing a plurality of pick-up devices **112** to the frame **60** at predetermined locations, each pick-up device **112** including a receiving element **100**, adjusting each receiving element **100** with respect to orthogonal axes to align the receiving element **100** with a respective predetermined position and orientation (col. 2, lines 63-68 to col. 3, lines 1-17),

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mounting at least one aircraft component **92,94,96** on the assembly tool, and performing an assembly operation (for example by **16**) on the at least one aircraft component **92,94,96**.

Regarding claims 16, 17, 20, and 21, note that the assembly process includes reconfiguring (col. 6, lines 19-28 and col. 7, lines 41-50) for a variety of aircraft components **44** by moving the pick-up devices **112**.

Regarding claim 18, the receiving element **100** is adjusted along at least two orthogonal axes by **58 and 52**.

Regarding claim 19, the adjusting includes adjusting along a third axis by **238**.

Regarding claim 22, note that CAD is used (col. 5, line 25).

Regarding claims 23-24, the device of Speller et al. has a fault monitoring function that detects and records error conditions (col. 7, lines 56-59). The system then corrects the fault to the proper position. This is considered to meet the measuring an actual position and an actual orientation of the receiving element and iterating the steps of iterating measuring and moving because the system corrects itself with the fault monitoring function.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Speller et al. in view of Bullen (US 5,848,458).

Speller et al. teach the invention cited with the exception of having a laser tracking device.

Bullen teaches a laser tracking device (col. 5, lines 24-26) in an assembly apparatus.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Speller et al. with a laser tracking device, in light of the teachings of Bullen, in order to provide an accurate position detecting sensor.

5. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Speller et al. in view of Akeel (US 5,987,726).

Speller et al. teach the invention cited with the exception of the clamping elements having six degrees of freedom.

Akeel teaches a clamping element (figure 5) allowing six degrees of freedom (abstract, lines 3-7).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Speller et al. with a clamping element allowing six degrees of freedom, in light of the teachings of Akeel, in order to provide clamping elements that have more dimensional flexibility.

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***Response to Arguments***

6. Applicant's arguments with respect to claims 15-26 have been considered but are moot in view of the new ground(s) of rejection.


***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number (571) 272-4530. The examiner can normally be reached on Monday-Friday between 5:30 a.m.-2:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ  
May 18, 2005

  
MARC JIMENEZ  
PRIMARY EXAMINER  
5/18/05